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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/080,023	02/21/2002	Zheng David Lou	10541-1281	7750
29074	7590	10/06/2003	EXAMINER	
BRINKS HOFER GILSON & LIONE P.O. BOX 10395 CHICAGO, IL 60611			MICHALSKY, GERALD A	
			ART UNIT	PAPER NUMBER

3753

DATE MAILED: 10/06/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/080,023

Applicant(s)

LOU, ZHENG DAVID

Examiner

Gerald A. Michalsky

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 11 September 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1,5-7,9,17 and 18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,5-7,9,17 and 18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. The disclosure is objected to because of the following informalities: Note U.S. Patents 4,678,893, 5,513,673, and 5,615,860, which are cited on page 1 of the specification and have been cited by the examiner herein. Patent No. 4,678,893 does not describe a hydraulic control valve, as recited on page 1. Patent No. 5,513,673 does not describe a valve having three control lands of equal diameter and long orifices extending through the valve body, as recited on page 1. Patent No. 5,615,860 does not describe a valve having lands of unequal diameter, as recited on page 1.

Appropriate correction is required.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 5-7, 9, and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Koenings or Arnold in view of Yokota et al. Claim 1 is considered met by either Koenings or Arnold except for a damping orifice. Figure 2 of Yokota et al shows a damping orifice 86 which damps pressure surges occurring in return line 85 to prevent such pressure surges from unduly affecting pressure in spring chamber 81. It would have been obvious in view of damping orifice 86 of Figure 2 of Yokota et al to provide a damping orifice connected to the end chamber having spring 75 of Koenings or spring 58 of Arnold in order to provide damping of pressure surges which occur in the return line from the valve to the reservoir in the event that the end

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chamber is connected to the return line to reservoir. Such a damping orifice would also inherently attenuate oscillations of the valve. Yokota et al shows a fluid reservoir 37 in Figure 2. Regarding claims 5 and 7, the specific diameter range specified therein would have been obvious to a person of ordinary skill in the art at the time the invention was made because applicant asserts no criticality in the specific range recited. Regarding claims 17 and 18, there is inherent leakage at land 28 of Koenings or land 34 of Arnold due to inherent manufacturing tolerances. Furthermore, land 28 of Koenings and land 34 of Arnold border the high pressure area at the inlets of these valves. Therefore, inherent leakage would occur between the areas of high pressure and low pressure present at each end of these lands in view of the sliding fit and tolerances inherent in the sliding arrangement.

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gerald A. Michalsky whose telephone number is (703) 308-1049. The examiner can normally be reached on M-F 5:30 AM - 2 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Rivell, can be reached on (703) 308-2599. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0861.

  
**Gerald A. Michalsky**  
**Primary Examiner**  
**Art Unit 3753**

GM  
September 30, 2003